



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/584,869

04/20/2007

Thomas Kothe

COZ-0535

7938

23575

7590

03/03/2009

CURATOLO SIDOTI CO., LPA  
24500 CENTER RIDGE ROAD, SUITE 280  
CLEVELAND, OH 44145

EXAMINER

SCOTT, ANGELA C

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,869	<b>Applicant(s)</b> KOTHE ET AL.	
	<b>Examiner</b> Angela C. Scott	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicant's response of February 23, 2009 has been fully considered. Claims 1-20 are pending.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4, 6-12, 15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al. (US 2002/0161071) in view of Perry et al. (US 6,514,334).

Regarding claims 1-4, 11-15, Mills et al. teaches a settable composition comprising (i) a cementitious composition (water absorbing composition) comprising from 25 to 95% of calcium aluminate (part of the cementitious composition forming ettringite during hydration, ¶19), from 0 to 10% of lime, and from 0 to 50% of calcium sulfate (part of the cementitious composition forming ettringite during hydration, ¶19), where the proportions of the components are such that the composition on hydration is capable of absorbing at least its own weight of water, and (ii) an aqueous emulsion of an organic polymer, the amount of (ii) in relation to (i) being such as to provide a weight ratio of polymer solids to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1, or (iii) an organic polymer in the form of a powder dispersible in water and where the amount of organic polymer is such as to give a weight ratio of polymer to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1 (¶¶ 7-14).

Mills et al. does not teach that the composition contains at least 13 weight % lime, at least 25 weight % lime, or at least 62 weight % lime. However, Perry et al. teaches a cementitious mixture containing a composition A and a composition B, where composition B is 80 to 99 weight percent calcium oxide (lime) (Col. 1, line 45 to Col. 2, line 20). Composition B is included in the mixture in an amount from 20 to 80 weight % (Col. 2, lines 62-63), more preferably from 30 to 70 weight percent (Col. 3, lines 56-58). At these amounts, and assuming that composition B is made of 90% lime, lime would be in the composition in an amount greater than 62 weight % (i.e., 90% lime at 70% composition B is 63% lime in the composition). Mills

Art Unit: 1796

et al. and Perry et al. are analogous art because they are both from the same field of endeavor, namely that of cementitious compositions. At the time of the invention, a person of ordinary skill in the art would have been motivated to include the above amounts of lime, as taught by Perry et al., in the composition, as taught by Mills et al., and would have been motivated to do so because the higher amount of composition B, which is mainly calcium oxide, results in a higher gain in strength in the composition (Col. 6, lines 29-31).

Regarding claims 5 and 16, Mills et al. does not teach that the water absorbing composition contains a stoichiometric surplus of lime, i.e., an amount of lime that is not included in the ettringite forming reaction. However, Perry et al. teaches adding up to 30 weight percent hydrated lime to the cementitious mixture comprising compositions A and B (Col. 6, lines 39-45). Adding this lime after the composition has been formed would preclude it from participating in the reaction. At the time of the invention, a person of ordinary skill in the art would have found it obvious to add additional hydrated lime, as taught by Perry et al., to a cementitious composition, as taught by Mills et al., and would have been motivated to do so because an increase in lime improves early strength which can be advantageous by allowing for normal concrete production during cold weather (Col. 6, lines 47-51).

Regarding claims 6, 8 and 17, Mills et al. additionally teaches a method of applying a coating to a surface comprising forming a mixture of a cementitious composition (i) and an aqueous emulsion (ii), and spraying (putting) the mixture onto the surface to form a coating at least 2 mm in thickness (¶37 and claim 5).

Regarding claims 7 and 18-19, Mills et al. additionally teaches a method of applying a coating to a surface comprising forming a mixture of a cementitious composition (i) and a dispersible organic polymer (iii), combining the mixture with an amount of water, and spraying the mixture onto the surface to form a coating at least 2 mm in thickness (¶37 and claim 6).

Regarding claims 9-10, Mills et al. additionally teaches using the coating of claim 8 as a rock support means (¶44) or to reduce or prevent weathering (waterproofing) (¶46).

Regarding claim 20, Mills et al. additionally teaches using the coating of claim 19 as a rock support means (¶44) or to reduce or prevent weathering (waterproofing) (¶46).

Art Unit: 1796

***Response to Arguments***

Applicant's arguments, see pages 5-11, filed February 23, 2009, with respect to the rejection(s) of claim(s) 1-4, 6-12, 15 and 17-20 under 35 U.S.C. 102 and claims 5, 13-14, and 16 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under 35 U.S.C. 103(a) as being unpatentable over Mills et al. (US 2002/0161071) in view of Perry et al. (US 6,514,334).

However, the Office would like to address the argument presented on page 8 of the February 23, 2009 response pertaining to Mills et al. teaching away from using more than 10 weight % lime. Applicant's argue that Mills et al. teaches against any use of lime in amounts greater than 10% by weight. This is not the case. As stated by the Office in the Final Action mailed on November 24, 2008, a proper teaching away would specifically state that to include more than the amount of lime taught by Mills et al. would be detrimental to the invention and why that is so. Mills et al. makes no statement such as that. While Mills et al. does positively state a weight range of lime that works for their invention, it does not discourage someone having ordinary skill in the art from trying more than 10% by weight of lime in the composition. Moreover, Perry et al. gives positive reasons as to why one of ordinary skill in the art would want to use more lime in the composition than that taught by Mills et al. Therefore, Mills et al. does not teach away from increasing the amount of lime used in the composition.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 270-3303. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 1796

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/  
Supervisory Patent Examiner, Art Unit 1796

/A. C. S./  
Examiner, Art Unit 1796